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## THE MUSICAL BOW IN ANCIENT MEXICO

M. H. SAVILLE

In the *American Anthropologist* for August, 1897, I published a short account of a primitive musical bow, called *hool*, played by the Mayas in the interior of Yucatan. I was led to make this note by the appearance of an article by Dr D. G. Brinton on "Native American Stringed Musical Instruments," which he published in the *American Antiquarian*, January, 1897. He described four stringed instruments, the most interesting being the *quijongo* of Central America—a wooden bow with a gourd resonator. This had previously been described by Dr Brinton in 1883, in the "Comedy Ballet of Gueguence." He surmises that stringed musical instruments existed in America in pre-Columbian times.

Prof. O. T. Mason, in the *Anthropologist* for November, 1897, gives a brief "Geographical Distribution of the Musical Bow," in which he comes to the conclusion "that stringed musical instruments were not known to any of the aborigines of the Western hemisphere before Columbus."

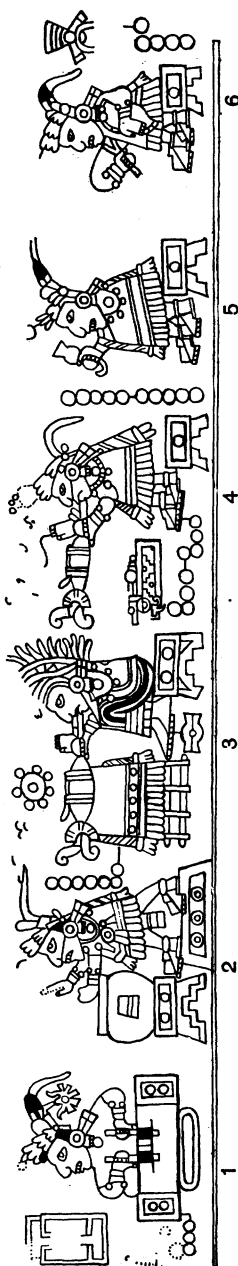
In *Science*, September 16, 1898, Professor Mason writes that Dr Carl Sapper believes the *hool* to have been introduced from Africa. Sapper states that "it is used by the Kekchi of Guatemala, who call it Marimbadie or Caramba. The same instrument is in use among the Xicaques, in Honduras, but they attach a *guacal* as a resonator." This is obviously the *quijongo* instrument. Professor Mason further says that Dr Sapper does not agree with him that the stringed musical instrument was entirely absent from the Western hemisphere, for he says: "The Lacandones have a two-armed guitar, which he thinks not to have been borrowed. The Kekchi also used strings on the scraping instruments called *su*."

Dr S. Habel, in his monograph on the Sculptures of Santa Lucia Cosumalwhuapa, published by the Smithsonian Institution in 1878, describes an instrument similar to the *quijongo* which he observed used by the Nahuatl-speaking Indians of the Balsam coast, San Salvador; he states: "I did not see, however,

any instruments of European pattern. I observed in the village of Whuisnagua (German spelling—Four-thorns; from *whuis*, 'thorn,' and *nagua*, 'four'), for the first time, their national instrument, called *carimba*. It consists of a reed five feet long and about an inch or an inch and a half thick. A brass wire is attached to the two ends, by which the reed is slightly bent. At a third of its length the wire is tied by a string to the reed, and at the same place is fastened to the opposite face of the reed an inverted *jicarro*, an oblong cup of the small kind of calabash fruit, with its opening downward. With a splint of a similar reed a foot long the two parts of the wire are touched, giving only two distinct sounds, which are varied by changing the time and rhythm. At the same time the opening of the *jicarro* is more or less closed by the palm of the left hand, which produces the melody desired." I think Dr Sapper is in error regarding the *caramba*, properly *carimba*, of the Kekchis being like the *hool* which I saw used in Yucatan.

Dr H. ten Kate, in the *Anthropologist*, March, 1898, describes and illustrates a musical bow from Patagonia, and is of the opinion that stringed musical instruments did exist in America in pre-Columbian times. Prof. E. S. Morse, in a paper delivered before the American Association for the Advancement of Science, at its meeting in Boston in August, 1898, was inclined to agree with Professor Mason as to the absence of the stringed musical instrument before the time of Columbus.

In publishing my note I merely wished to record the occurrence of the musical bow in Yucatan, without entering into a general discussion of its antiquity, although I gave a hint concerning my idea of its being purely aboriginal, in stating that the Indians using it lived remote from Spanish influences. I had searched through the ancient Mexican codices and had found a single representation of a stringed musical bow, which I shall now figure and describe. A few words concerning the Mexican codex in which it is found may not be out of place. It was published in Geneva in 1892 by Henri De Saussure, under the name of "Le Manuscrit du Cacique." He states that it had been known since 1852, and he made a copy from the original when it was in the hands of Don Pascual Almazan, of Puebla. It later became a part of the famous Becker collection, now in Darmstadt. The reproduction was made from the copy. It was



a singular coincidence that in the same year, 1892, the Mexican government published in the sumptuous volume, "Antigüedades Mexicanas," a Mexican codex under the name of "Codex Colombino," which is undoubtedly a part of the "Manuscrit du Cacique." It was formerly known as the "Codex Doremborg," from the name of the German merchant, Señor Carlos Doremborg, of Puebla, who sold it with his collection of antiquities to the Mexican government. A single page had been published by Leopoldo Batres in 1889, in his work on the "Civilization of Ancient Mexico." Of its pre-Columbian origin there can be no question, although in the "Codex Colombino" there has been written on each page a short text in the Misteca language, reproduced in the page published by Batres, but omitted in the publication of the codex in its entirety. I cannot state whether there is a Mistecan text in the Becker codex, not having seen the original. In a number of other pre-Columbian Mexican codices such written texts are found, notably in the "Codex Sanchis Solis," published by Dr Antonio Peñafiel in his "Monumentos Mexicanos," without, however, the Zapotecan text—a circumstance much to be regretted. These two Mistecan codices make a book of forty pages, the "Codex Colombino" containing twenty-four, the "Manuscrit du Cacique" sixteen. It is made of deerskin, coated over with a slight surface of white paste, really stucco, upon which the ideographs and pictures have been painted in various colors, and, unlike many of the ancient codices, has been painted on but one side of the page. It is one of the

highest class of old Mexican codices, and is of the greatest importance for the study of ancient Mexico.

In the "Manuscrit du Cacique," on pages 8 and 9 (Saussure's numbering), in the upper third of the pages, is found a series of six figures, forming, so far as my knowledge goes, a unique representation of what may be called a pre-Columbian "orchestra." For the sake of convenience I have numbered them from 1 to 6. Figure 1 represents a seated person playing the horizontal wooden drum, *teponaztli*, a log hollowed out on the under side and having on the upper surface two tongues made by two long, lateral cuts separated in the center by a cross-cut. The two drumsticks, with ends covered with *ulli* (india-rubber) for beating these tongues, are well shown. This form of drum is still used in Mexico and Central America, in remote villages, on feast days, and in several museums are preserved specimens with beautifully carved symbolic pictures. Figure 2 shows a person standing on a low platform, playing the *huehuell*—a vertical drum hollowed out of a log, the upper end covered with a skin, played by beating with the hands, as here shown. A magnificent carved *huehuell* is preserved in the Toluca Museum, Mexico. Figures 3 and 4 represent musicians playing a kind of wind instrument which I have not succeeded in identifying. In figure 3 it rests on a stand covered with a decorated cloth. In figure 4 it has no rest. It appears to be an oval object, around which two cords are tied, with a stick inserted for tightening. A reed mouthpiece can be seen, and from the flaring outer end issues the representation of sound. The position of the right hand in either figure, which is raised, renders it possible that the instrument may be a kind of reed flageolet with a gourd resonator, the hand being raised from the holes in the reed. Figure 5 shows the rattle, with a curved handle. Figure 6, the last of the row, which most concerns us, represents a seated person with a bow held by the left hand, the string being pressed against the arm near the elbow, while in the left hand is held a forked stick, undoubtedly for use in twanging the tightened cord of the bow. These six musicians all face the same way, to the left, as is the case with the heads in the Mayan hieroglyphs.

This ensemble of musicians, in which the bow has a place, seems to be sufficient proof of the existence of the musical bow

in ancient Oaxaca at a time anterior to the coming of the Spaniards. As we know so little of the ethnology of this state, one of the most interesting for the archeologist and ethnologist in all Mexico, it is not at all unlikely that this bow may still be used in the Misteca, where, up to the present time, no ethnological research has been made.

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### BOOK REVIEWS

*The Art of Graphology, or "The Discovery of an Improved System of Graphological Analysis with Cipher Cards."* By Prof. J. W. Small, F. C. S., F. G. S., F. A. I., G. B. I., M. R. A. S. S. (C. B.), Principal Victoria College, Ceylon. Madras, 1898.

The author of this curious contribution to pseudo-science defines graphology as "the study of handwriting as an index to the character of an individual." Many pages are taken up with the laudation of the accuracy of his system, which is nowhere clearly explained. Instead, we have the glittering generalities to which we are accustomed in works of this kind. We give some examples:

"No man can judge of another's writing unless he has certain graphological instincts to determine it."

"Was an open, 'gushing' nature ever known to close the loops of o's and a's? Was a self-contained person ever known to keep the loops open? Why do energetic men write peculiarly and the weak and desponding differently? Why does the critic divide his letters and the man of connected ideas keep them together? Why do the romantic and sentimental write sloping hands with long-tailed letters, and the selfish close their loops of letters?"

To these the author vouchsafes no answer.

After wandering in vain through many pages of this sort of matter in hope of finding some coherent and intelligible statement of the "system," we are finally informed in chapter vi that "my graphological analysis or key-book to character is contained in the form of *cipher cards*, which, if in your possession, with a key, may enable you to read the character of any individual, known or unknown, from his handwriting."

This is a severe disappointment. We had thought that at last